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ON THE EVOLUTION OF ORGANIC EXISTENCES.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—If you and your readers are not already wearied with my speculations on the nervous fluid and its agency in the animal economy, I hope it will render them patient under the present infliction, to know that this is the last of the kind with which the pages of the Journal will be encumbered for a season.

The chief object of this communication is to introduce to the believers in the doctrine of the transition of species, a new candidate for the honor of being the connecting link between the class of invertebrated and that of the vertebrated animals. It has been the prevalent idea among naturalists that the cuttle fish was immediately below the fish in the scale of gradation. No one, to my knowledge, has ever advanced the idea that the lobster, as the highest of the invertebrata, was more justly entitled to that position than the animal last mentioned. But the reasons which are to be offered, whatever weight they may have in the minds of others, leave little doubt in mine that such is actually the fact. In order, however, to the better understanding and appreciating of them, it will be necessary to give a more explicit view of the opinions entertained by me in regard to the causes of the production of vital phenomena, and their mode of operation, than has hitherto been done.

Those causes which are known to operate on the living body, influencing its growth and its functional movements, if we know nothing to the contrary, it is most natural to infer are those which gave origin to it.* Such are the impressions of gravity, of heat, of touch, of light, of sound and of color. Whether these are all different in themselves, or different activities of the same agent, though the latter opinion seems to me most probable, it matters not to our present purpose. By their mutual co-operative action, aided by the reaction which a part once formed has on the future development, a consistent explanation may be afforded of the form and external relations of every organic structure. This second principle, which is perpetually modifying the first, and is the chief cause of so much diversity among living beings, is expressed by saying that *everything subsequently formed is a reflection from what was formed before.* Every successive development is thus the result of the joint action of two forces, viz., the reflection of the preceding development, and the continuation of the action of the same causes that gave rise to that development. Thus every transition and reproduction is a reflection. The flower is a reflection from the branch, the fruit from the flower, the offspring a reflection from the parent. The body of man is the product of the greatest number of reflections that can possibly take place, allowing the process of development to go on without limitation; while the inferior animals present successive stages of arrest of development, before all the reflections have taken place.

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* That the Deity created living beings by the slow and gradual operation of certain laws, instead of calling them into existence at once by a word, we infer from the general analogy of nature. For if they were not created in this manner, they are an exception to everything else that is created, of which we have knowledge.—If, in the second place, the body is formed by certain laws, it is most natural to infer that those laws are the same which affect the body after it is formed, and to which it responds. Now the laws or agents which affect the body are those of gravity, light, heat, sound, smell, touch, &c. Therefore, other things being equal, it is more natural to infer that they formed the body than not. Adaptation of living beings to external circumstances would be another consequence of their being formed by these agents. Man, for instance, being formed in part by the influence of light, his animal functions are suspended at intervals which are proportional to the absence of light from that part of the surface of the earth on which he dwells. Were he formed in the moon, his periods of rest and motion would occur but once in 28 days. Hence this adaptation, which is so strikingly displayed, is another proof that he was formed by the circumstances by which he is surrounded.—The remaining considerations in support of this opinion are, the revelation by geology of the existence of these agents previous to the existence of living beings, and of the existence of the simpler forms of life previous to that of the more complex; spontaneous generation; the gradation of animals; the differences according to locality; the transformation of species, as of the caterpillar into the butterfly, and the tadpole into the frog; and the recent unexpected discoveries made by the French and German physiologists in embryotomy, which prove that the higher animals, not excepting man, pass through stages corresponding to the permanent state of each tribe of the inferior animals successively, while in the womb. If to these can be added the proof derived from showing a close and in-

With this qualification, then, heat, light, sound, &c., acting on the materials found on the surface of the globe, earth, air and water, are the instruments concerned in giving origin to a series of effects, of which the lowest vegetable is the first, and man is the last. In his person every series of impressions has produced its maximum of effect. Each has elaborated its proper organ, until a just equilibrium between all its parts is attained, while the whole body is a system of organs in equilibrio with each other. This point of equilibrium, when every part reflects to every other part a force equal to that which it receives from it, is the perfection of the law; no further change is then possible.

This development takes place in the order of the relative activity of the impressions. Each series developes, first, the function, and secondly, the organ to which it bears relation; so that the organ seems to rise incidentally, as it were, during the performance of the function, though afterwards contributing to the greater perfection of the function. The impressions of heat being the most active, after gravity, develope the vegetable, and are the cause of the vegetative functions throughout. The impressions of touch, or the impulses of the surrounding media, which are second in activity, detach the product from the earth, and form the animal as soon as they have acquired a certain preponderance over those of heat. By the tactile impressions the ganglionic nerves are formed; and the development of the motor tract keeps pace with the growing power of the specific, compared with the general sensations. The ganglions occupy, between the external and internal surfaces of relation, the situation of nodal points, and the nerves the situation of nodal lines in optics and acoustics, supposing the body an elastic me-

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timate connection between the laws of optics, considered as the producing cause, and the anatomy of the eye; the laws of acoustics and the anatomy of the ear; and the anatomy of all parts of the body where there is sufficient regularity to enable conclusions to be drawn, and the impressions operating upon them, all which I have no doubt can be done, there will remain not the shadow of a reason for hesitating to adopt the conclusion to which they lead.

dium, and to be thrown into vibration by the impulse made on the surfaces, and are formed by electrical currents whose course is marked by the direction of the nervous fibres. In process of time the specific impressions (light, sound and odor) begin to exert a greater control over the motions and shape of the animal than the diffused impressions of touch. A second change now takes place, which is the change from the invertebrated to the vertebrated class of animals. The motor tract, which formerly accommodated itself to the disposition of the ganglions, now, in obedience to the superior force of the electrical impulse along the centre from the organs of vision and the other senses, straightens itself to form the spinal marrow, while the ganglions arrange themselves on either side at convenient distances. That state of rest which is essential to the formation of bone, is transferred from the circumference to the centre, and instead of an external crust, we have an internal axis, to which the motions of the animal are referred, and about which its parts are arranged.

Now it is just in the position at the end of the invertebrated class of animals that the lobster is found, and the transformation is or was effected from this animal, to the fish, by the same operation that changes the caterpillar into the butterfly. The reasons for this assertion are as follow.

1. The crop of the lobster presents so striking a similarity to the head of vertebrated animals, that it might safely be called the germ of the internal skeleton. And indeed from this resemblance it goes by the popular name of the "lady." There are the frontal bones very distinct; underneath them are spaces that seem manifestly intended for the eyes; beneath and between these is a membrane which is disposed like the schneiderian membrane; and still further below, an opening similar to a mouth. At the sides are cavities in two osseous processes projecting inwards, in the manner that the petrous portions of the temporal bones project into the cavity of the cranium. These cavities are evidently adapted to receive the organs of hearing. Above the slit, between the two processes, or teeth, as they are called, is a third process, which, if we conceive it bent down at the centre, would correspond with the basilar process of the occipital bone. The whole of the crop, so formed, I consider to be a reflected image of the anterior surface of the animal. By using the term image, I do not mean to express an exact likeness of the part, but that it is formed on precisely the same principles that an image is formed by light when it falls on a plane or regular surface. That is—those impulses which the impressions of light, sound, touch, &c., make on the nervous fluid at the head or anterior surface, are transmitted inwardly, until they are met and reflected by the impulses from the posterior surface. And the animal molecules at the points where they meet and antagonize each other, receive no pressure which is calculated to move them out of place.* This, according to the undulatory theory of light, is the mode in which an image is formed. So long as the impulses on both the anterior and posterior surfaces are

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* To appreciate this fully, it is necessary to bear in mind that an impulse on any part throws the whole mass into vibration.

equal, so long will the structure remain as it is. But as the specific impressions on the anterior surface are growing in importance while they are elaborating their organs, a time must come when they will overbalance the general impressions on the whole body. The face of the crop, which looks towards the tail of the animal, will then shoot forward. By an action of the same nature as metastasis of disease, the imperfect eyes, or rather their images, are reflected to their new position in the spaces referred to above, and there reappear under a more perfect form. The organs of smell and hearing undergo the same transformations; the former from the base of the smaller antenna, the latter from the base of the larger. At the same time the process of ossification is transferred from the circumference to the centre. The external skeleton, which restricted the motions of the animal, gives place to a spinal axis with its arrangement of nerves, muscles and bloodvessels, and viscera around it, and the animal, which before moved hither and thither, sideways and backwards, when it should go forward, becomes obedient to the impressions made on the organs of the senses, as to a helm. And the brain, occupying the same relative position to the nervous expansions in the new order of things, as the old, begins to expand by the force developed at the points of union of the impulses from the body, along the nerves posteriorly, and those from the organs of the senses anteriorly.

2. A strong and unexpected confirmation of this idea, is the fact that an action of the very nature required to produce the spinal axis, is exhibited by many animals of the lobster kind, at the period of their moulting or casting the shell. A deposit of two bony substances, called crabs' eyes, is found on each side of the stomach just before this process is performed, which soon afterwards disappears. This looks just as though nature had made the attempt to produce a spinal axis along the centre, but the point d'appui giving way by the bursting of the shell too soon, she failed.

3. In the structure of his shell, the lobster presents about the first trace of the chief component of bone in the vertebrated animals, viz., phosphate of lime; and the red color, which is that of the blood in the vertebrated animals, predominates in his shell, and in a tissue beneath the back, the nature of which is not well understood.

4. The lobster (as does also the cuttle fish) swims backwards. In other words, the impulses made by impressions on his body are stronger in the antero-posterior than in the postero-anterior direction, and his body is propelled accordingly. If the crop occupy the centre to which these impulses are transmitted, it must follow that when his body is thrown into universal muscular action, as in swimming, the pressure upon it is greater from the head of the animal than from the tail. If the surface becomes immoveable, the force developed must act on the crop, tending to propel it towards the tail. Now the muscular action at the period of moulting is violent, apparently exhausting the strength of the animal. And it seems to be a question with nature, at this time, whether the shell shall give way and the animal remain a lobster, or the crop should "go ahead" in the shape of a fish—a question decided by the relative degree of resistance at the centre, that is, the crop, and at the circumference.

5. The fact itself that the animal swims backwards, which is a very bungling motion, and seems to call for some change, by which it may move towards the object of attraction in a more polite manner.

6. There are reasons for supposing that certain of the higher species of the univalves change into the crustacea. The opinion entertained by most naturalists that one of these animals, whose anterior half is covered with a shell like the lobster, while its posterior half is naked, seeks the cast-off shell of a univalve for a domicile, inasmuch as it is without analogy in nature (now that a similar opinion in regard to the argonaut is disproved), is probably erroneous; and the truth may be found to lie in this animal's being intermediate between the molluscæ and the crustacea. Even if the fact be as naturalists now suppose, it is probably because it occupies this position that it seeks a habitation which is adapted to its nature and wants. Perhaps the process of forming shell on the anterior surface of the body, as in this animal, precludes that of secreting it from the tail, in the manner of the univalves, in consequence of a metastasis of action.

After the above transformation is effected, the nerves of specific and general sensation are found lying in a straight line in the plane of the horizon. From this line, and at right angles to it, bulgings are met with, at the points where the optic, olfactory, and spinal nerves meet and unite. These bulgings are made by the shocks along the course of the nerves, and receive the names of the olfactory and optic lobes and the cerebellum. In the progress of development, the two first of these unite to form the cerebrum, while the cerebellum remains distinct. By degrees, the inclination of the nerves towards each other changes, so as to form an angle between them, at the point of which, the brain may be conceived to expand as from a centre, on which the shocks are concentrated. The tendency of this expansion is to go on until the whole nervous system has attained that shape and disposition of all its parts, that when the nervous fluid is thrown into vibration from any cause, the shocks return to the centre from all points of the circumference at the same time. A tolerably accurate idea of the nature of the nervous system will be conveyed to the mind by representing to it four hemispheres, united by a double axis, crossing at the centre. The brain would correspond with two of these hemispheres, and all the nerves issuing from it with the remaining two. Were each half of the brain a single organ, and free to be developed according to its inherent tendency, it would form a perfect hemisphere. As it now stands, the shape which it assumes is the joint product of the original tendency to form a hemisphere, and the modification induced by the pressure of the two lateral halves on each other, and also by the circumstance that the impulses are directed to three points, corresponding with the three bulgings, instead of to one only.

The sides where the two hemispheres come in contact are flattened, on precisely the same principle that when two chesnuts grow in the same cell of the capsule they are flat on the sides of contact, while a single one is round. The convoluted appearance of the cerebrum and the arborescent appearance of the cerebellum, owe their origin not to any difference in the kind of action on each of these structures, but are examples of the two great forms of arrangement which nature assumes for the carrying on of its refined processes. It is the same action precisely that throws the brain into convolutions, that produces the intestinal convolutions. The difference between the two arises from the fact that the latter are tubular, a consequence of the passage of substances through them.* But the functional action in both takes place not in the centre of the convolutions, but in the circumference, in the parietes of the alimentary canal, and in the cortical part of the brain. The cerebellum assumes the arborized appearance by the same law that produces the bronchial and arterial trees in the lungs and liver. Neither in the cerebrum nor in the cerebellum is there so much separation or subdivision of parts, because there is not so much motion required in the performance of the function. In the stomach the impulses are directed against the food, in the lungs against the air, in the brain against the arterial blood. The arterial blood passing up and down in front of the spine or *line of rest* of the body, and the nervous influence in the same directions on the opposite side of the *line of rest*, meet and repel each other, *above* in the periphery or cortical part of the brain, *below* in the muscular structure. The muscular structure is, therefore, in the body, what the cortical structure is in the brain, the medium in which the reciprocal action of the nervous fluid and arterial blood takes place, and muscular contraction is an *incidental effect*, if I may be allowed the expression, of this action of impulsion and retropulsion. The nervous fibre is a conducting tissue between the two media ; and as the tension of the nervous fluid is greater on equal spaces than that which is present in the blood, it requires a more extended surface of contact in order that one should neutralize the other. Hence the predominance in size of the muscles over the nervous chords in the limbs, and the expansion of the surface of the brain into convolutions.

The different manifestation of function of different parts of the brain is not referable to a different vital endowment, but simply to their position, size, and mode of development as it affects the general equilibrium. The cerebellum, for instance, is not the organ of amativeness, but from its structure and position relative to the other parts of the nervous system, it may more frequently than any other part of the brain exhibit traces of disease in disturbances of the organs of generation. If any one will take the trouble to observe the direction of the optic nerves as they proceed behind from before, and the spinal marrow as it proceeds upwards from below, and imagine the brain to be developed from the point of union (which indeed would be an imaginary point in man), and to obey the impulses along the course of their fibres, he will perceive that the pressure at first is more upward and backward than upward and forward. Consequently the brain would be developed more in the backward than in the forward part of the head, if its growth should be arrested before it comes to perfection. Thus the relation between the anterior development of the brain and intellectual capacity, and the posterior development and the passions, may be explained without the generous, and indeed wholly *gratuitous* offer which phrenology makes us of 36 organs. For the exercise of the intellect a high degree of activity is necessary ; a state of action of the nervous system in which the sympathetic irradiations from the body are the least possible. While such a process is going on, the brain obeys its natural tendency to the hemispherical shape. The passions and propensities bearing relation to the bodily wants, are lower in the scale of endowment, and hence are most active in those whose brains are most imperfect or less developed anteriorly. Not that the brain thinks or feels. The brain, together with the whole nervous system, is a structure by which thought and volition are made manifest within our bodies, become personified, insulated, as it were. There is a something beyond what the senses reveal to us, where thought lies. But in order that it should manifest itself most perfectly, the nervous molecules must be arranged in such a manner as to interfere as little as possible with the vibrations of the nervous fluid. In this consists the perfection of the nervous system, and to this point the law of organization tends.

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* It is owing to a cause essentially the same that the covering of the brain is bony, that of the abdomen muscular and membranous, and that of the thorax half muscular and half bony, viz., the degree of motion underneath. Bone is the crystallization of animal matter. No one, it appears to me, can call to mind the process of ossification without being struck with the similarity between it and the formation of ice on the surface of water. By the same reason that a certain amount of motion of water underneath will break up the ice or destroy the tendency for it to form, the movements within the abdomen prevent the deposit of bone over it, while the peculiar manner in which the lungs are expanded allow of a bony deposit at alternate intervals, and the very slight motions of the brain allow of it over the whole surface.

It has been supposed that the width of the brain had some relation to the animal courage of the individual. This fact, if it is one, admits of explanation in this way. Each lateral half of the brain antagonizes the opposite half of the muscular system. If so, the brain must receive from every muscle an equal impulse to that which it sends to it. Now in a thick-set, broad-shouldered, muscular man, the mean of all the impulses from one side of the body to the opposite side of the brain crosses the axis at a greater angle, and must give rise to a greater lateral pressure, than in the more delicately formed. Again, it is in those possessed of the greatest physical endowments, that we meet with the most frequent examples of physical courage. At least it will be found to be the fact as often as the phrenological dogma holds true. We may thus see on what basis phrenology stands. By the observation of such obscure coincidences, without any definite idea of the nature of the nervous activity, it sets consciousness and anatomy at defiance, and draws straight lines and crooked ones to prove that all mental philosophy is wrong, and all physiology absurd.

Proof has never yet been adduced that the brain is the organ of the mind. All we know is the fact that the nervous system and mental manifestation are intimately connected. As to pressure on the brain annihilating consciousness, is there not as much reason to suppose that the effects of that pressure extend through the whole nervous system ? as when you press the surface of a violin, you disturb its vibrations throughout its whole extent. The brain has other offices than the mental ones to perform. Increase the pressure a trifle, and you throw a man down. Surely you must have touched the organ of stand-up-itiveness ! Where is that organ on the map ? Is there not reason to suppose that as much tension is kept up by the muscles on the brain in thinking, as by the brain on the muscles in voluntary motion? Why do we gesture in intense intellectual and moral excitement? At one moment we witness a man delirious, in the next convulsed. To-day he is comatose, to-morrow paralytic. The melancholic is torpid in his feelings, dull in his intellect, and indisposed to muscular exertion. In delirium tremens the tremulous agitation of the muscles is but the counterpart of the peculiar activity of the mind. In general paralysis, and in disturbed function of the brain by causes which produce pressure on that organ, we find the muscular powers keeping pace with the mental faculties in their decline. First fails memory, commencing often with loss of that highest branch of it which relates to dates and proper nouns; co-existent with this is loss of the most complicated and highest form of muscular movement, as that of the tongue in articulation; and the failure proceeds, *pari passu*, through both the principles of sensibility and muscular motion, in the reverse order to that in which they are developed as we ascend the scale of gradation—a fact which demonstrates that the higher faculties do not manifest themselves in connection with the successive addition of parts to the brain, but depend on a more refined action—on *degrees* of vital endowment connected with a just equilibrium of development and activity in all parts of the nervous structure and of the whole man.

As it is probable that the assertion that functional action forms organic structure, will appear more paradoxical than any other advanced above, I shall beg the indulgence of the reader to a few remarks, in conclusion, on this branch of the subject, in another number.

Benjamin Haskell, M.D.

VEGETABLE DIET.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—I have just finished the perusal of the last of your correspondent's long series of articles, on my late work on Vegetable Diet. Had it been an ordinary newspaper squib, or had it been in the form of a regular review, I should have followed the course I have hitherto—to this hour—pursued, in relation to these attacks, however personal; which is to pass them by in silence. But so peculiar is the character of the articles to which I allude, and so respectable is the medium through which they have found their way to the world, that, with your permission, I venture a few statements, for once, in the way of self-defence.

When I first took up your Journal of October 24, and saw the commencement of a series of remarks from an individual whom I have been taught to respect highly for his gentlemanly treatment of those who happen to differ from him in opinion, I will not hesitate to say that I was highly gratified. Even when I saw his statement that on certain subjects my mind was accustomed to "run riot," I was not at all startled, because I was looking forward to see what evidence would be adduced in support of such an assertion. The truth was, I hoped for something on the subject which would at least have the merit of candor and good intention. How little did I expect, instead of candor and fair play, continual unfairness and misrepresentation and ridicule. But disappointment is said to be the common lot of man!

I do not wish to follow your correspondent through his whole series of articles, and reply to all his numerous questions which are fairly answered in the work he censures, but which, from his own occasional concessions, it is evident he has never yet carefully read. I only wish to present a few statements, to show those who have not read the work, how little certain kinds of evidence is to be trusted, in certain circumstances. There are other "special pleaders" in the world besides myself, as the careful reader of the work in question, and of your correspondent's statements, cannot fail to observe.

In the first place he attempts—like those who have gone before him in the same sort of warfare—to throw dust in everybody's eyes by the perpetual cry of "bran-bread," "bran-bread system," "bran-bread gentlemen," "bran-bread doctors," "bran-bread controversy," "bran-bread logic," and "bran-bread and dried apples." This perpetual misnomer —not to say falsehood (I mean the phrase *bran-bread*)—is repeated no less than ten or twelve times. Does not your correspondent know better than to charge me perpetually with being an advocate for bran bread? Does he know what bran and flour are? I am no advocate for either, and never have been in any writings of mine, nor do I have anything to do with either, in practice, if I can help it. I prefer *meal* —whether of wheat, rye, corn, or any other grain—and have nothing to do with bran or flour, if I can conveniently avoid them. It is indeed a small matter; but this writer makes so much ado about it, that I thought a disclaimer was demanded on behalf of others as well as myself. For my own part, I care more about the spirit which evidently dictated these epithets, than the practical falsehood which they carry on the face of them.

Nor does it give one a more favorable impression, to have the essays of a grave man continually interlarded with such expressions as the following. "Broken-down, lean-visaged dyspeptics;" "gaunt, wry-faced, lantern-jawed, ghostly-looking invalids;" "cranium-cracked dyspeptics;" "moonstruck gentlemen and ladies;" "humbug;" "starvation;" "starving;" "ultra-starvation;" "mad-cap doctors," &c. Were these original with your correspondent, it would have an appearance somewhat different; but does it add to the weight of his argument, or establish his claims to respectability in the eyes of his brethren, to fill half his paragraphs with these old, hackneyed, newspaper epithets?

But this is not all. Has he done well to misquote or misrepresent so many of my sentiments? Even if done accidentally, was it wise? He sometimes acknowledges, "I am impatient," &c. Has a candid man a right to be so impatient as to distort, materially, the views of his antagonist?

First, in his zeal to convict me of "bad grammar," he quotes me as saying I became reconciled to flesh and fish again, and indulged in it freely. For the word *it*, he would, of course, substitute *them.* But my language is this: " I had no sooner become reconciled to the use of flesh and fish—which was at the age of fourteen—than I indulged in it quite freely." I leave it to the veriest tyro in grammar to say on whom devolves the charge of " murdering the king's English."

Secondly, he says, " Dr. Alcott has been laboring at this business from his very childhood, say thirty years." But *what* business? Why, according to Murray's grammar, not your correspondent's nor my own —he must be supposed to mean the business of procuring the twenty-three letters of which he speaks. But where does he learn this? From the preface of the work, where I state that the preparation of this and another much larger work—the Young Housekeeper—have together cost me three years' labor? Or was it from the statement that Dr. North first sent out his circular in February, 1835, about four years ago?

Thirdly, he makes a great mistake—perhaps I should not call it a misstatement—in representing the circular as intended by the author, Dr. North, to *confirm* what he calls the bran-bread system. Nothing was further from the views of Dr. N., and if I can do no more, I ought certainly to attempt to disabuse that gentleman. It is a matter of surprise that after stating so distinctly that the main object of this circular was to obtain facts—if such facts could be obtained—*against* the bran-bread system, and not in *favor* of it, any man of good sense should put such a construction upon the whole matter. I venture to affirm that in few instances has more impartiality been shown, in the bringing forward of evidence, than was shown in this whole case, your correspondent to the contrary notwithstanding.—Even the opinion of Dr. Harden, of Georgia—in relation to which I have been accused of a quibble—is misrepresented.

Fourthly, I am three several times made to say, in the work in question, that animal food is " the root of all evil." The bible says " the love of money is the root of all evil;" and every truly candid reader understands by it no more than that the love of money is *a* root of every species of evil. This I intended to affirm of animal food. I did not intend to represent it as *the* root of all evil; and accordingly I was guarded in my expression—quite so, I think, for an insane man—and did not say so. Will your correspondent look once more at the expression?

But, fifthly, I have joined Mr. Graham, in applauding the virtues of abstinence and starvation. When and where have I joined Mr. Graham? My great sin, in this region, is that I will not join Mr. G. Surely I cannot be guilty in both ways. Again, what do these men mean by starvation? Is there nothing on earth fit to be eaten but flesh meat?

Sixthly, I am made to say that life could be indefinitely protracted, if people were made acquainted with the discoveries which I and my colleagues have made in dietetics. Again, I ask, when or where?

Seventhly, we are told that the book in question consists of the stock of Dr. North and myself, as it was put together in 1836. Is this the whole truth?

I cannot forbear noticing one misrepresentation more. I am made to say, if I understand your correspondent, that drinking, at all, is a very bad habit. Now I have never said this, either in my work on vegetable diet, or anywhere else. Let the sentence where I have taught such a doctrine be produced.

These are specimens—Mr. Editor—and nothing more, of the misstatements and errors of your correspondent. I might add many, very many more. But I will not be tedious because he may have been so—not indeed to me, but probably to most others. On the contrary, I will be as brief as possible.

In his first number he says, "Our food, in the state in which it comes to our hands, is not suitable for nourishment. Our organs can find no nutriment in it." Nothing could be more erroneous. Without saying that it is best in that condition, I do not hesitate to say that most persons can be very well sustained on a great variety of articles, as they come to our hands; as every one who can put two thoughts together ought to know.

He says adult man has no "natural diet." It is not so; and I think that to him belongs the task of proving a doctrine so ultra and so obviously unfounded.

He proposes many a hard question, as he no doubt regards it, but I think that any medical man who has read the book he pretends to review, will be a little surprized at this. He will be especially surprized at the tone and manner in which he requests, or rather demands, a reply. Most of the questions will be found to be answered—and, as I think, satisfactorily—in the work which is made the subject of animadversion. For a reply to his question about the vegetable millions of the East, let him look at pages 231 and 263; where I think I have shown both the folly and the unfairness of comparing, in this matter, the Asiatic with the European. Let Asiatic be compared with Asiatic, and I have no fear for the results.

I am willing, however, to answer, gratuitously, one question. "How happens it that the flesh-eating nations of Europe are so far from having *run out*, that they furnish better specimens of fully and perfectly developed men than any other of all the descendants of Adam? Where shall we find a people, who, in mental and physical endowments, can be matched with the Europeans?"

My reply is, that the flesh-eating nations of Europe do not furnish better specimens of fully and perfectly developed men than the vegetable-eating nations of the same quarter of the earth. The best specimens of physical development in Europe are to be found among the peasants in Germany, Switzerland, Poland, Austria, and the north of Italy, whose diet is of the simplest kind, and, as a general fact, chiefly or entirely vegetable. Nor is their mental development inferior to that of other nations, considering their advantages and the nature of their religion and government. But the South Seas, if we can credit the best authorities, furnish specimens of physical development, far better still. The same may be said—according to Myers and the best European geographers and travellers—of the Japanese. Nay more, they are not only superior, bodily and mentally, to all the other southern

Asiatics, but almost equal to the best nations of Europe itself. I need not say to medical men, how the South Sea Islanders and the Japanese are fed; for they are probably acquainted with all the facts to which the world has access on the subject.

I will only add that much which your correspondent says of the longevity of New Englanders, of our not eating too much, and of the appetite as a competent guide, with sundry other matters not less true because they are old, and not more true because they have been told a great many times over, has very little weight with me. The joke about eating "all the while," &c. &c. is a good one; but unfortunately for the truth in the matter, by leaving out the phrase "for a time," the whole meaning is changed. Let me also offer one word of counsel to your correspondent, which is, that when he sits down again to offer his witticisms, he will probably find it better for himself and for all concerned, to be a little better prepared with solid argument, provided he should want it, as might peradventure happen. Let him see, moreover, that he understands the subject in debate; and let him at least try to know something about the bills of mortality of his own town and those adjoining. W. A. Alcott.

Providence, R. I., Dec. 7, 1838.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, DECEMBER 19, 1838.

SUCCESSFUL OPERATION FOR A NEW NOSE.

The case which we are about relating, is the second rhinoplastic operation which has been performed in Boston, by the same surgeon, within a comparatively short period; and as both have been perfectly successful, there is more pleasure in speaking of the last, as we did of the first, in a plain, simple manner, that it may not interfere with the interest of a detailed, scientific account, which may be anticipated in the Journal at a convenient time. It is due to the profession, especially, that every fact connected with the manner in which this important operation was conducted, from beginning to end, should be faithfully detailed.

A young lady, now about twenty-seven years of age, belonging to the State of Maine, thirteen months ago, was urged by an uncle to consult a medical pretender by the name of Nason, of Waterbury, since dead, in consequence of the existence of a small wart, as she denominates it, near the tip of the nose. It was considered a cancerous pimple, which should be dispersed, and the doctor, therefore, advised the application of caustic. This produced a high degree of inflammation, which was so extensive and severe that poultices were used for reducing it. These were continued, it seems, a considerable time—for on the fourteenth day after using the caustic, in the act of taking off a poultice, the entire fleshy part of the nose dropped off, close to the bones, producing a shocking and wholly unlooked for calamity. For a young lady, whose features were regular and handsome, in the prime of life, health, hope and enjoyment, nothing could have been so disastrous or painfully distressing as a facial deformity of this character. On seeking further advice from the same source, she was told, by way of encouragement, that the organ would grow again, and eventually be perfectly restored.

Having waited thirteen months, without discovering any indications of a reproduction of the nose, and having read in the newspapers an account, which was extracted from this Journal, of a successful taliacotian operation in Boston (above referred to), she came to this city for surgical advice. This was in August last; but for some reason, she returned home, and again arrived in Boston early in November.

Everything being in readiness, on the 17th of November, Dr. J. M. Warren commenced the operation by taking a large triangular piece of skin from the middle of the forehead, which was detached, except a small strip between the eyes. The broad flap, on being reversed, was necessarily twisted in the narrow part. The edges about the locality of the original nose were pared, and the edges of the transported material for the new one, nicely adjusted in all directions, and secured by ligatures instead of pins. Keenly as the unfortunate patient must have suffered—for it was not the work of a moment, but a slow process, to fit one part to another—she never manifested the slightest indications of uneasiness. Such is the fortitude of females. Finally, the best part of the narration may be expressed in a few lines. Everything worked kindly—the new nose knit by the first intention, and the nostrils and wings are well turned, and promise to go on improving in appearance. We called upon the heroic patient the other day, and found her sitting in a comfortable great chair at the breakfast table, free from pain, the inflammation having subsided, and in a fair way of soon being in a condition to return to her friends.

This is truly another triumph of science and art, in the restoration of that essential feature of the face, on which expression and articulation necessarily depend. The patient came here an object of digust to herself, and exciting the deep sympathy and commiseration of all who chanced to see her; but she leaves Boston, a living monument of the boundless resources of human ingenuity, with a deep feeling of gratitude towards God and the surgeon, not to be expressed, and only to be felt, in full force, in the secret recesses of a woman's heart.

Cleft-Palate Instrument.—An editorial notice has appeared in the New York Evening Star, announcing the invention of something extraordinary in the way of surgical instruments for performing operations on cleft palate and hare lip, by Dr. E. H. Dixon, pupil of the late Dr. Hosack, &c. It is pretty evident that this gentleman is determined to make his locality extensively known. It is questionable whether he is entitled to as much merit as he seems to claim on the score of pathological knowledge. With regard to the instruments, before blowing the trumpet to the annoyance of the neighborhood, it might be well to get the opinion of experienced surgeons upon the value of the improvement, if such it claims to be.

University of New York.—Dr. A. Sidney Doane, of New York, formerly of Boston, extensively known as an able translator of numerous professional works, has been elected professor of physiology in the medical department of the University of New York. We congratulate the institution. A man better fitted to give character to the chair could not have been selected in the Union.

Lithotomy.—Dr. Knight, Professor of Surgery in the Medical School at New Haven, recently performed the operation of lithotomy in Middletown, Conn. The calculus was *five inches in diameter, and weighed six hundred and ninety-one grains.* The patient is represented to be doing well.

Artificial Eyelid.—A southern correspondent writes as follows :—"In one of the back numbers of the Journal (p. 130, Vol. 18) is mentioned the discovery of a new method of making an artificial eyelid. This discovery is not original, at least with him who pretends to claim it. You will find, by referring to the New York Medical and Physical Journal, No. 2, New Series, for 1829, an account of the first attempt of this kind ever made, and which happily succeeded. It was by one Dr. Abner Hopton, of Clinton, N. Carolina. The doctor never made any boast of his simple invention. He merely published the naked facts in a very few words. Nevertheless, when another lays claim to its originality, it is expedient that we render unto Cæsar that which is Cæsar's."

Medical Prize.—The Medical Society of Augusta, Ga., offer a prize of fifty dollars, or its equivalent, to be designated by the successful competitor, for the best *approved* original essay, *On the use and abuse of Calomel, as a therapeutic agent.*

The following are the arrangements adopted by the Society :

1. The essay shall not exceed forty octavo pages.

2. Essays, intended for the competition, are to be directed, *free of expense*, "To the Secretary of the Medical Society of Augusta, Ga.," and must be in his possession by the first of May, 1839. Each essay must be endorsed with a *motto*, which must be also on an accompanying sealed letter, containing the name and address of the writer.

3. The Medical Society will, as a body, proceed to the reading and inspection of all the essays received by the Secretary, as soon as practicable after the 1st day of May, 1839, and will determine by the vote of the majority, on the successful essay. After such decision, the letter bearing the corresponding motto, will be opened, and the essay published under the name of the author, in the Southern Medical and Surgical Journal.

4. Should none of the essays be judged worthy of the prize proposed, they will remain in the hands of the Secretary, subject to the order of their authors, for three months, the names remaining under seal ; after which, if not otherwise directed, they will be considered the property of the Society.—*South. Med. Jour.*

Vascular Organization of the Crystalline Lens.—The existence of vessels in the crystalline is doubted by many, who imagine that nourishment is conveyed to it by the small quantity of fluid—the liquor Morgagni—that we meet with in the capsule of the lens ; or, according to Sir David

Brewster, by the aqueous humor of the eye. But the fact that the lens is supplied with vessels from its capsule, is proved from injections having been made to pass from one to the other, not only in different animals, but in some instances in the human eye. The existence of these vessels seems probable, also, from the circumstance, noticed occasionally, of the sudden formation of cataracts, where the most complete degree of opacity of the lens took place in the course of a few hours from the first sensation of dimness. In more than one of these cases, extraction showed that the lens was opaque, while the capsule retained its transparency entire.

Medical Miscellany.—Dr. Channing's oration before the New York Physician's Society, on Homœopathy, meets with harsh treatment; no one likes it—not even the author, by this time.—Drs. McDowell and Mc Gill have sailed from Baltimore, for Cape Palmas, Africa, in the service of the Colonization Society.—Dr. McLung was recently killed near Bexar, Texas, by the Indians.—Dr. Bell's Eclectic Journal, for December, commences the re-publication, from this Journal, of Dr. Hayward's surgical report. The monthlies do not always avoid the division of articles—the objection sometimes made to the weeklies. Dr. B.'s last Select Library contains the first part of that valuable work, Hunter's Principles of Surgery.—A correspondent in South Carolina hopes that Mr. Combe will visit that part of the country, where, he says, many warm friends will be found to greet him.—A half Part of No. 5 of Copland's Dictionary has been published in London, which proceeds as far as INF. The English edition is to comprise 6 Parts. We have not heard whether any arrangements have been made for continuing the American edition. —Sir Anthony Carlisle has had a trial at Westminster Hospital, by a committee of inquiry, for alleged misconduct in the case of an insane patient, and acquitted.—A case lately occurred in England, in which 18 grs. of blue pill, taken in the course of three days, proved fatal to the patient.—A correspondent in the Lancet states that he has recently arrested the decomposition of some fishes preserved in spirit in imperfectly stopped bottles, by the addition of a small quantity of tannin to the spirit.

TO CORRESPONDENTS.—We are compelled to defer, till next week, an interesting account of the effects of breathing carbonic acid gas, in a recent case at Cambridge. Other favors are also deferred.

DIED,—In Chester, Dr. Martin Phelps, 82.

Whole number of deaths in Boston for the week ending Dec. 15, 32. Males, 12—females, 20.

Of consumption, 8—old age, 2—brain fever, 1—child-bed, 1—apoplexy, 1—dropsy, 2—disease of the lungs, 1—drowned, 1—lung fever, 2—scarlet fever, 5—typhous fever, 1—dysentery, 1—infantile, 2—intemperance, 1—abscess, 1.

MEDICAL ALMANAC for 1839, for sale at the Medical Journal office. Price 75 cts. On account of the binding, these cannot be sent by mail.

Also, for sale, a few copies of Dr. Tuckerman's Letter to Dr. Warren, on the climate of Santa Cruz. Price 12 1-2 cts. Dec. 19.

FOR SALE,

WITHIN thirty miles of Boston, an estate now occupied by a physician, who is about to leave the place. It will be sold at cost, which is between 2500 and 3000 dollars. The practice is a valuable one, as can be satisfactorily shown to any applicant. For name and place, inquire at this office; if by mail, post paid. Nov 21—3t

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VACCINE VIRUS.

PHYSICIANS in any section of the United States can procure ten quills charged with PURE VACCINE VIRUS by return mail, on addressing the editor of the Boston Medical and Surgical Journal, enclosing one dollar, *post paid*, without which no letter will be taken from the post office. Oct. 25.

ALBANY MEDICAL COLLEGE.

The public course of lectures in this Institution will commence on Wednesday, the 2d of January, 1839, and continue sixteen weeks. The new and extensive College edifice, which has been completed during the past summer, is situated in a central position, and in architectural character, dimensions, and internal arrangement, is admirably adapted to the purposes of medical instruction. The museum of the institution occupies a room fifty feet square, two stories high, with a gallery, and glass cases above and below. It is furnished with an extensive and choice collection of specimens in healthy and morbid anatomy, together with casts, models, plates, and magnified drawings in great variety, and every kind of preparation necessary to illustrate the departments of Anatomy and Physiology, Surgery and Obstetrics. The other departments are provided with ample means for illustration, and with all the apparatus and materials necessary to render the courses full, practical and complete. The Anatomical Theatre, which will be appropriated to all the demonstrative branches, is fifty feet square, with seats for 400 persons, arranged in a circular manner around the area for the lecturer, which is lighted by a large dome and sky-light immediately above it. The dissecting rooms, which are spacious and convenient, will be kept open during the term, under the immediate charge of the Professor of Anatomy, by whom every facility will be provided for the cultivation of practical anatomy and operative surgery.

The Chemical Laboratory and other apartments are large and commodious, and well adapted to the purposes for which they are designed. The course in Chemistry and Natural History will be illustrated by extensive and richly furnished collections in Mineralogy, Geology and Botany, and to some extent in Comparative Anatomy. In Materia Medica and Medical Jurisprudence, as well as in the other departments, it is designed to exhibit as many facts and illustrations as possible, and to render every subject, so far as is practicable, a demonstrative one.

There will be clinical instruction in Surgery and Practice every Saturday during the term, at the hospital connected with the Almshouse, where there will be opportunities of witnessing a great variety of cases and surgical operations. All operations on the poor will be performed gratuitously (if in the presence of the class) during the term.

Degrees will be conferred at the close of the term, and all the powers and privileges conferred by other medical institutions of the State, will be secured to the graduate. The requirements of candidates for graduation are the same as at other institutions.

The lectures in the different departments will be delivered as follows:

Principles and Practice of Surgery, by - - - - -	Alden March, M.D.
Theory and Practice of Medicine, by - - - - - -	David M. Reese, M.D.
Chemistry and Natural History, by - - - - - -	Ebenezer Emmons, M.D.
Anatomy and Physiology, by - - - - - - -	James H. Armsby, M.D.
Obstetrics and Diseases of Women and Children, by -	Henry Greene, M.D.
Materia Medica and Pharmacy, by - - - - - -	David M. M'Lachlan, M.D.
Medical Jurisprudence, by - - - - - - -	Amos Dean, Esq.

The price of tickets to all the lectures is $65. Graduation fee, $20. Matriculation fee, $5. Dissecting fee, $5. Graduates, licentiates, regular practitioners, and students who have attended two full courses of lectures at any incorporated institution, are required to pay only the matriculation fee.

The price of boarding and lodging varies from $2,50 to $3,00 per week.

Albany, 1838. O31* J. H. ARMSBY, *Dean of the Faculty.*

MEDICAL INSTRUCTION.

The subscribers are associated for the purpose of giving Medical Instruction. Students will be admitted to the medical and surgical departments of the Massachusetts General Hospital, may see cases in one of the Dispensary Districts, and have abundant opportunities for observing the smallpox and varioloid diseases. They will receive clinical instruction upon the cases which they witness, and during the interval of the regular lectures at the College, they will receive instruction by lectures and recitations upon the various departments of medical science. Ample opportunities will be afforded for the cultivation of Practical Anatomy. They have access to a large library, and are provided with a study, free of expense.

Applications may be made to either of the subscribers.

M. S. PERRY, M.D.
H. I. BOWDITCH, M.D.
J. V. C. SMITH, M.D.
H. G. WILEY, M.D.

July 25—eoptN—emtJy

PRIVATE MEDICAL INSTRUCTION.

The subscribers are associated for the purpose of giving a complete course of medical instruction. Their pupils will have regular access to the medical and surgical practice of the Massachusetts General Hospital. They will be admitted, also, to the practice of the House of Correction, which constantly presents a large number of important cases, and whereopportunities will be afforded for acquiring a practical knowledge of compounding and dispensing medicines. They will be furnished with opportunities for the study of Practical Anatomy, not inferior to any in the country. To the pupils, particularly to those in the last year of their professional studies, facilities will be afforded for acquiring a personal acquaintance with private medical and obstetric practice. Instruction by examinations or lectures will be given in the different branches of medical studies, during the interval between the public lectures of the University. Books, and a room with fire and lights, will be furnished to the students at the expense of the instructers.

GEORGE C. SHATTUCK,
WALTER CHANNING,
JOHN WARE,
GEORGE W. OTIS, Jr.
WINSLOW LEWIS, Jr.

Oct 31—eptf

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